FIG 1A

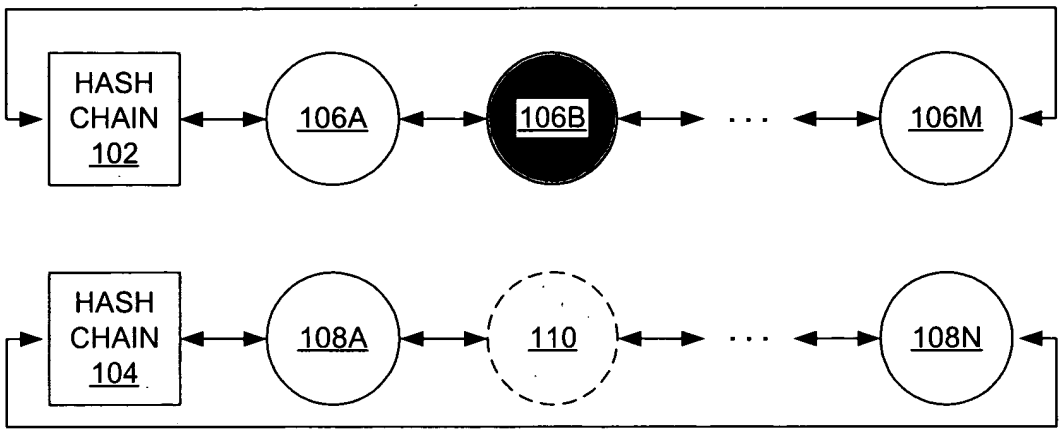

100
HASH CHAIN 102
106A
106B
106M
HASH CHAIN 104
108A
110
108N

FIG 1B

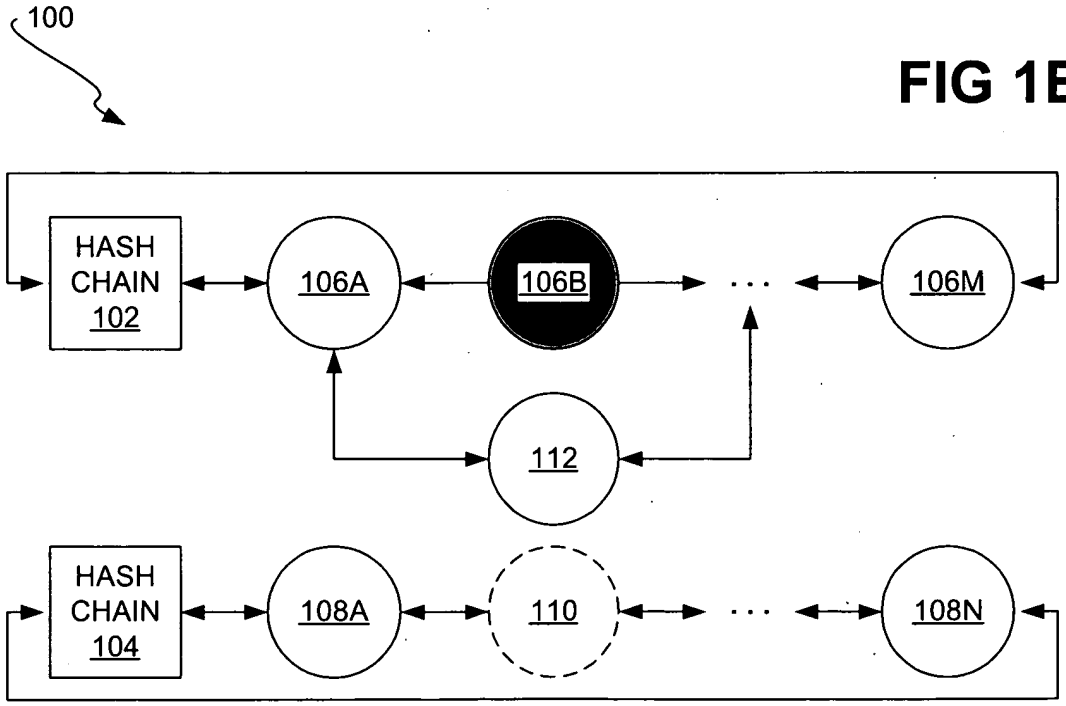

100
HASH CHAIN 102
106A
106B
106M
112
HASH CHAIN 104
108A
110
108N

FIG 1C

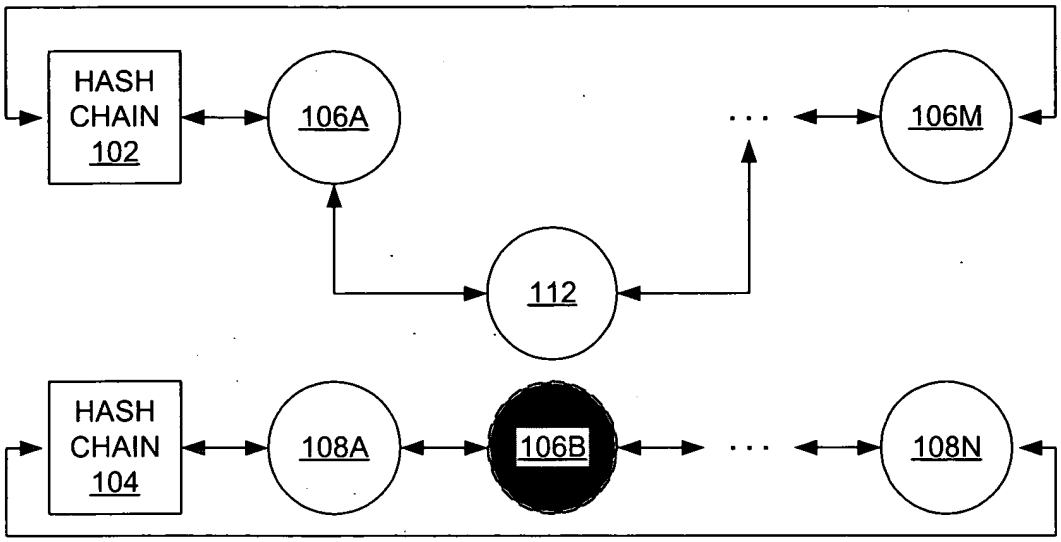

100
HASH CHAIN 102
106A
106M
112
HASH CHAIN 104
108A
106B
108N

FIG 1D

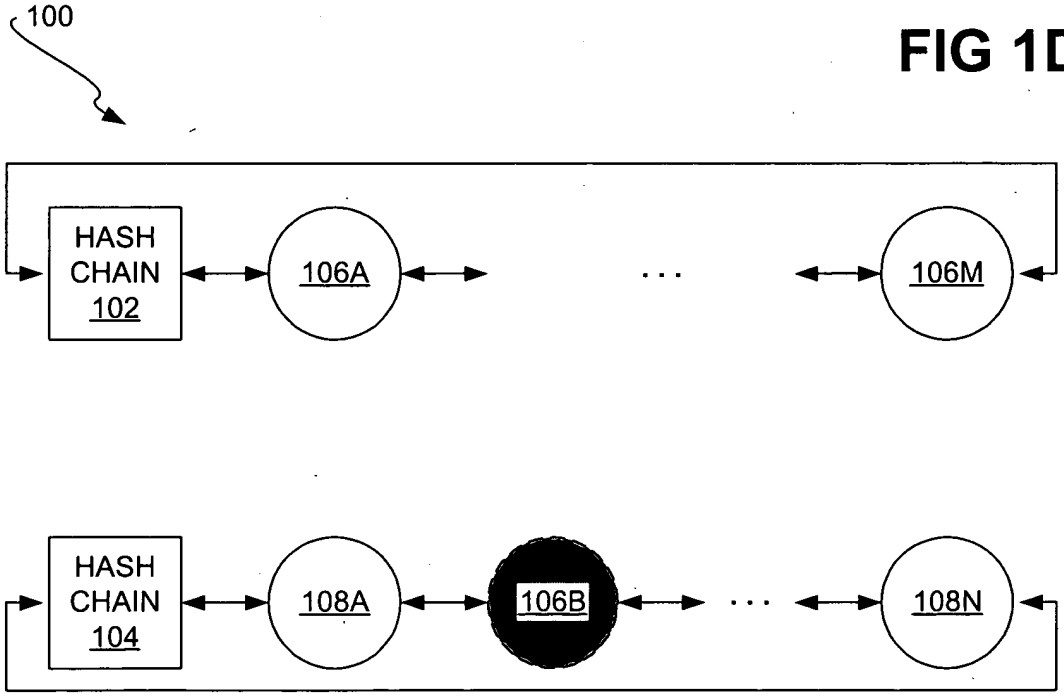

100
HASH CHAIN 102
106A
106M
HASH CHAIN 104
108A
106B
108N

FIG 2

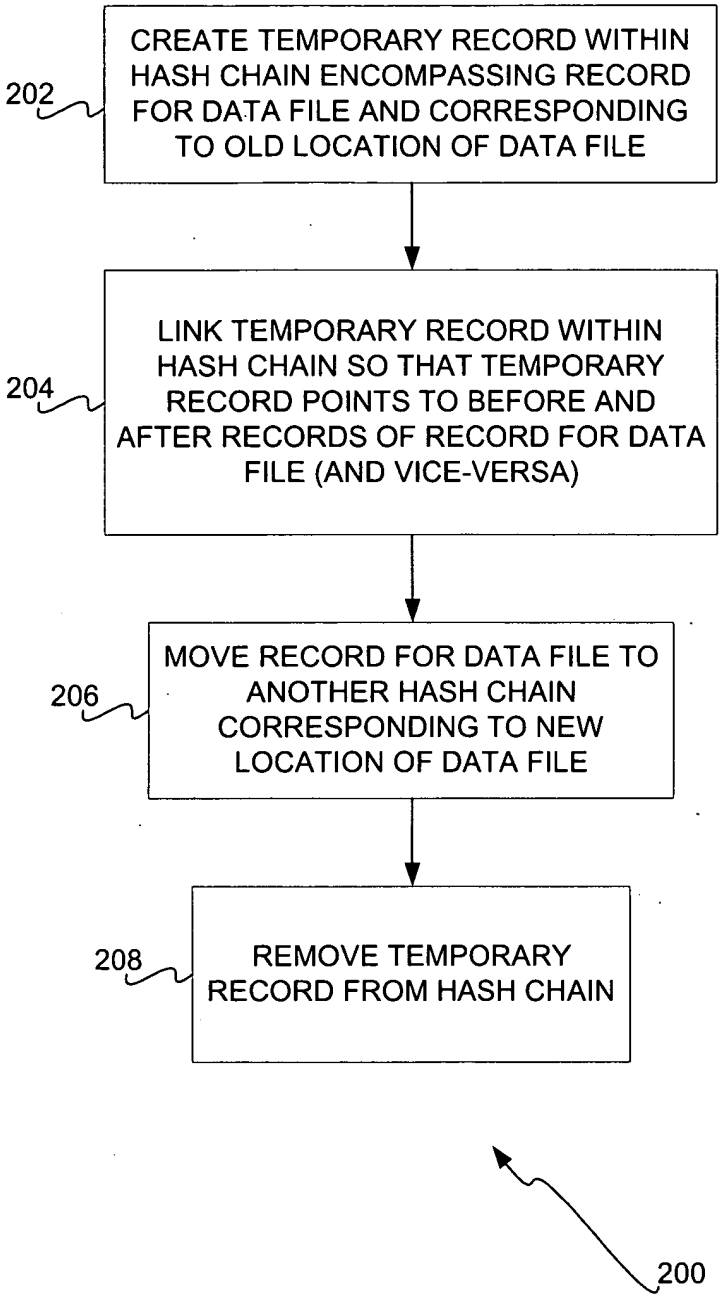

CREATE TEMPORARY RECORD WITHIN HASH CHAIN ENCOMPASSING RECORD FOR DATA FILE AND CORRESPONDING TO OLD LOCATION OF DATA FILE
202
LINK TEMPORARY RECORD WITHIN HASH CHAIN SO THAT TEMPORARY RECORD POINTS TO BEFORE AND AFTER RECORDS OF RECORD FOR DATA FILE (AND VICE-VERSA)
204
MOVE RECORD FOR DATA FILE TO ANOTHER HASH CHAIN CORRESPONDING TO NEW LOCATION OF DATA FILE
206
REMOVE TEMPORARY RECORD FROM HASH CHAIN
208
200

FIG 3A

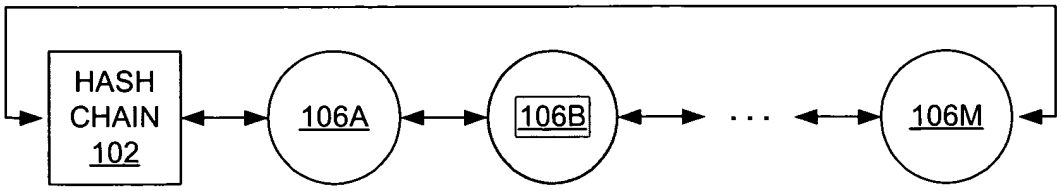

HASH
CHAIN
102
106A
106B
106M

FIG 3B

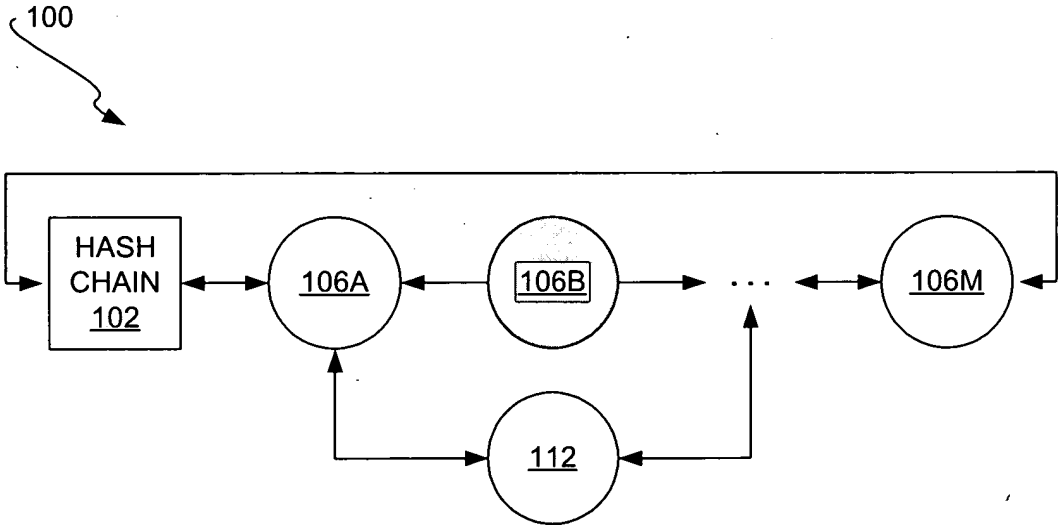

100
HASH
CHAIN
102
106A
106B
106M
112

FIG 3C

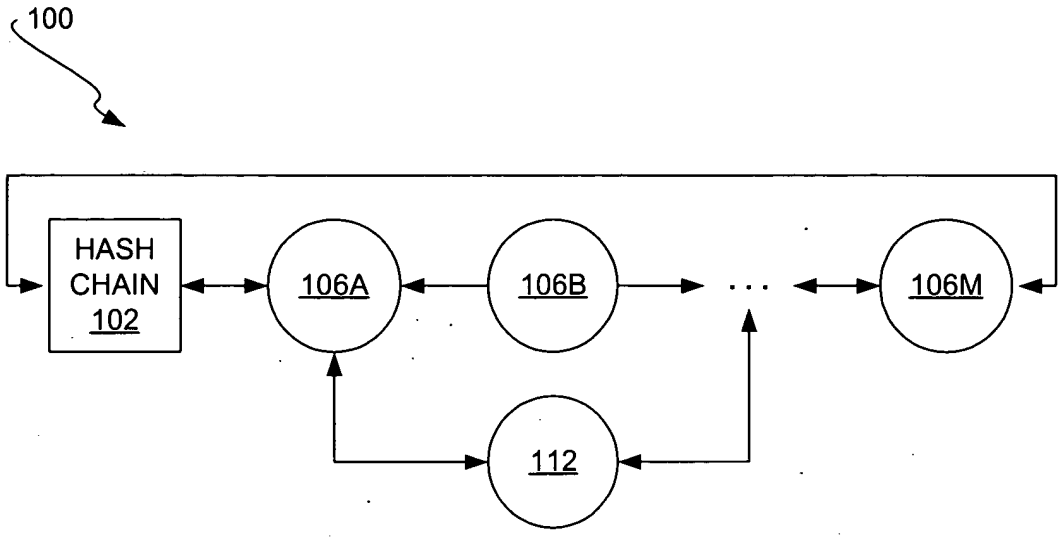

100
HASH CHAIN 102
106A
106B
106M
112

FIG 3D

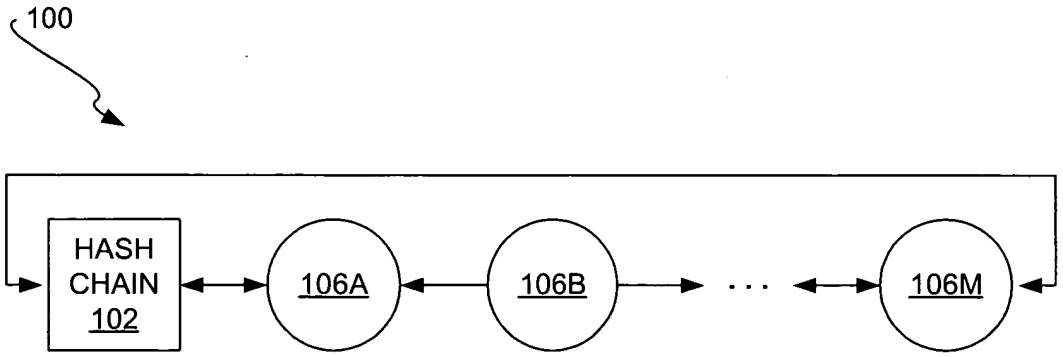

100
HASH CHAIN 102
106A
106B
106M

FIG 4

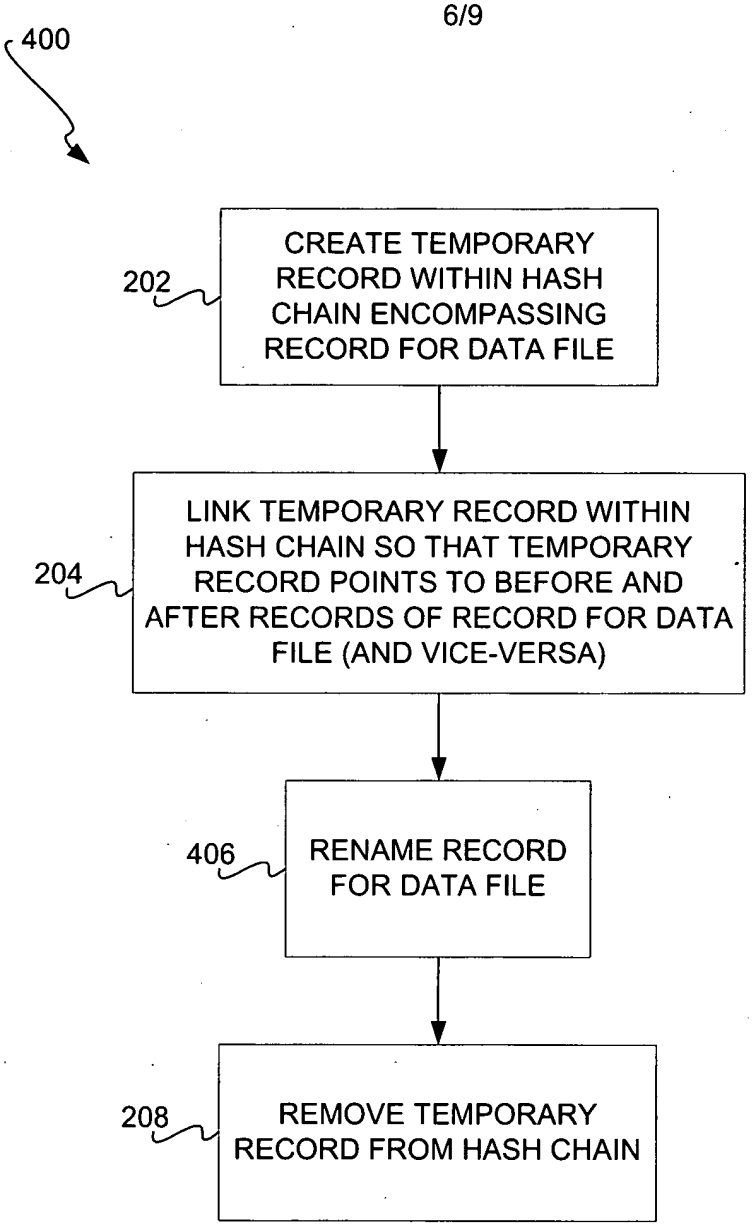

400
202
CREATE TEMPORARY RECORD WITHIN HASH CHAIN ENCOMPASSING RECORD FOR DATA FILE
204
LINK TEMPORARY RECORD WITHIN HASH CHAIN SO THAT TEMPORARY RECORD POINTS TO BEFORE AND AFTER RECORDS OF RECORD FOR DATA FILE (AND VICE-VERSA)
406
RENAME RECORD FOR DATA FILE
208
REMOVE TEMPORARY RECORD FROM HASH CHAIN

FIG 5

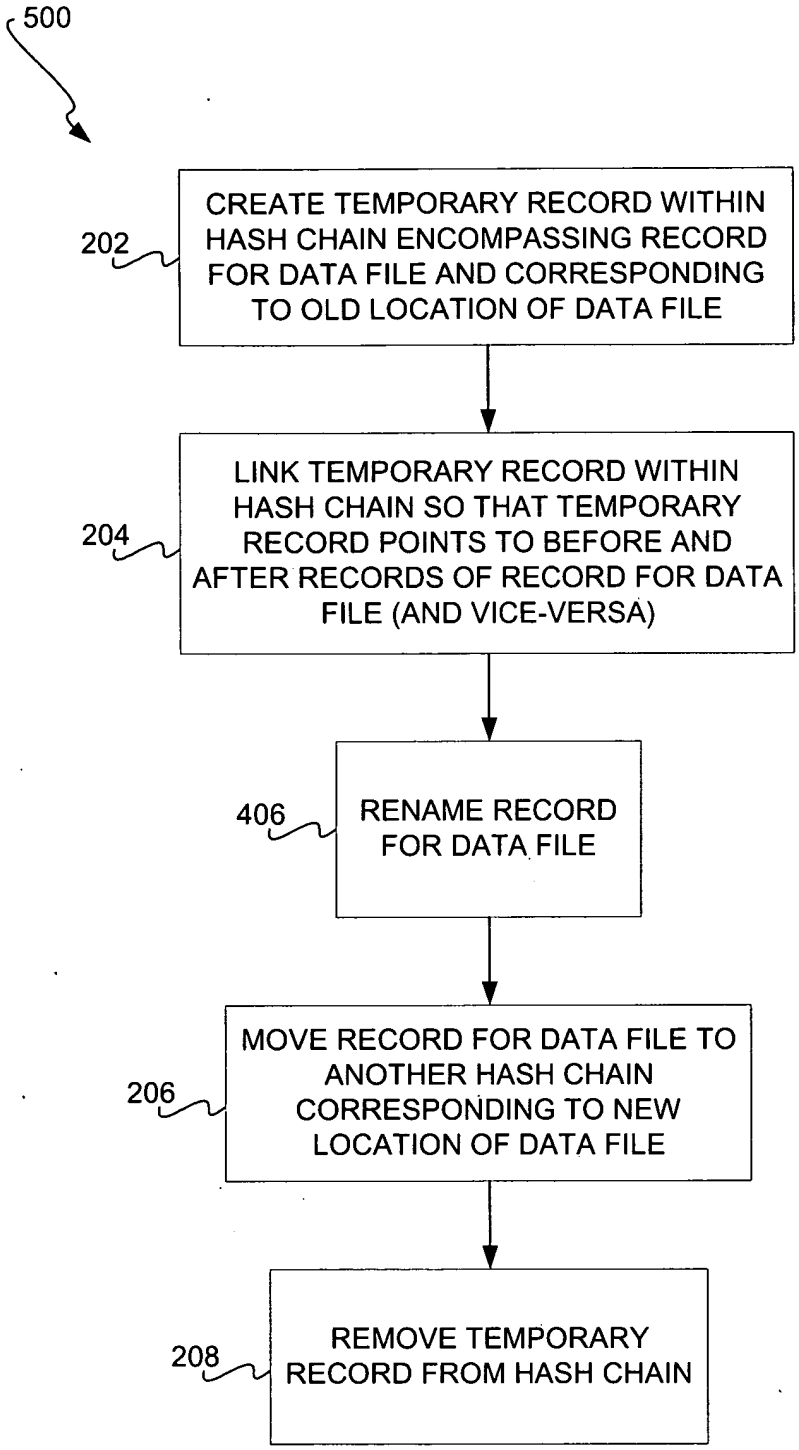
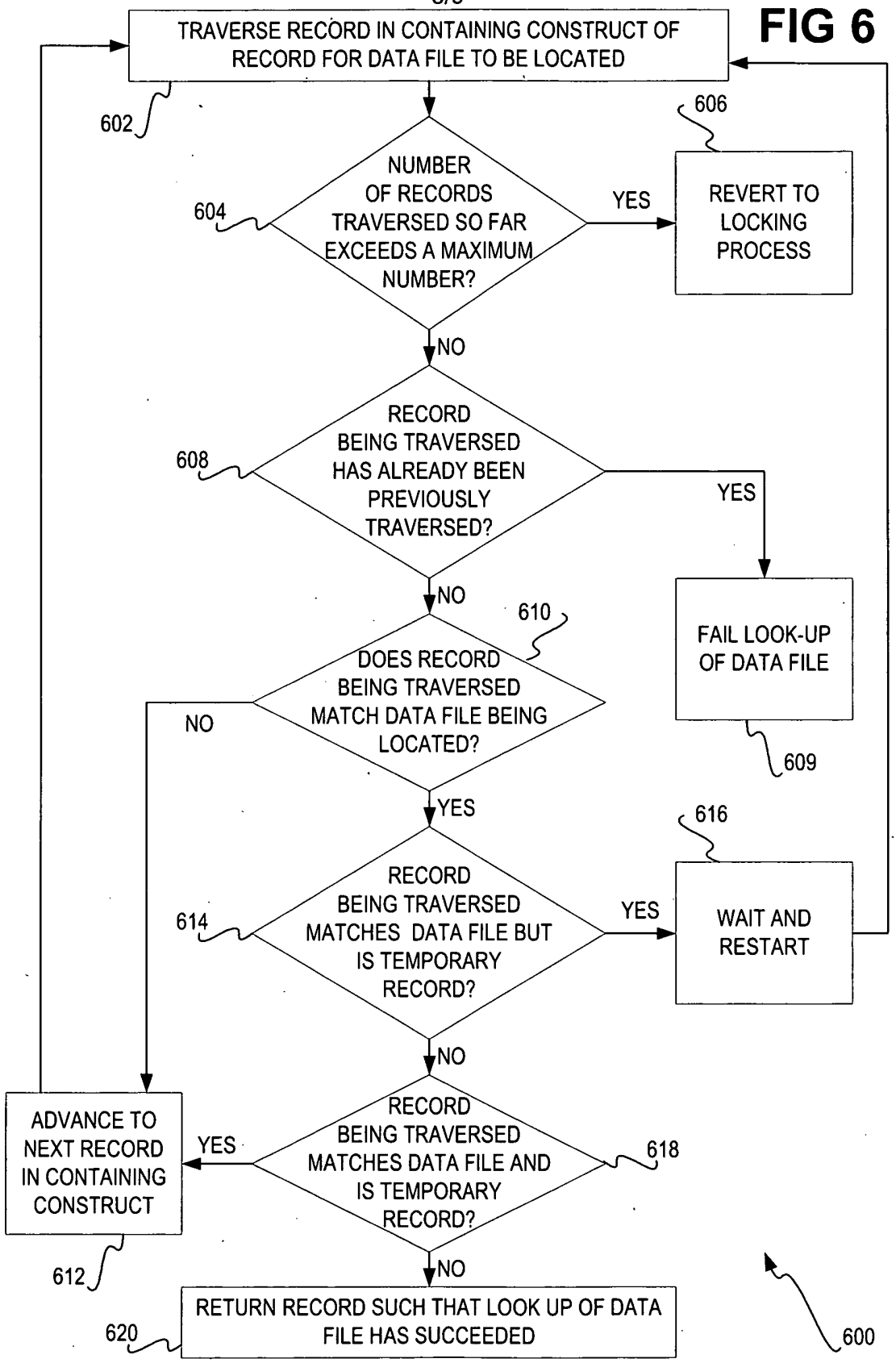

500
202
CREATE TEMPORARY RECORD WITHIN HASH CHAIN ENCOMPASSING RECORD FOR DATA FILE AND CORRESPONDING TO OLD LOCATION OF DATA FILE
204
LINK TEMPORARY RECORD WITHIN HASH CHAIN SO THAT TEMPORARY RECORD POINTS TO BEFORE AND AFTER RECORDS OF RECORD FOR DATA FILE (AND VICE-VERSA)
406
RENAME RECORD FOR DATA FILE
206
MOVE RECORD FOR DATA FILE TO ANOTHER HASH CHAIN CORRESPONDING TO NEW LOCATION OF DATA FILE
208
REMOVE TEMPORARY RECORD FROM HASH CHAIN

FIG 6


TRAVERSE RECORD IN CONTAINING CONSTRUCT OF RECORD FOR DATA FILE TO BE LOCATED
602
NUMBER OF RECORDS TRAVERSED SO FAR EXCEEDS A MAXIMUM NUMBER?
604
YES
606
REVERT TO LOCKING PROCESS
NO
RECORD BEING TRAVERSED HAS ALREADY BEEN PREVIOUSLY TRAVERSED?
608
YES
FAIL LOOK-UP OF DATA FILE
609
NO
DOES RECORD BEING TRAVERSED MATCH DATA FILE BEING LOCATED?
610
NO
YES
RECORD BEING TRAVERSED MATCHES DATA FILE BUT IS TEMPORARY RECORD?
614
YES
616
WAIT AND RESTART
NO
RECORD BEING TRAVERSED MATCHES DATA FILE AND IS TEMPORARY RECORD?
618
YES
ADVANCE TO NEXT RECORD IN CONTAINING CONSTRUCT
612
NO
RETURN RECORD SUCH THAT LOOK UP OF DATA FILE HAS SUCCEEDED
620
600

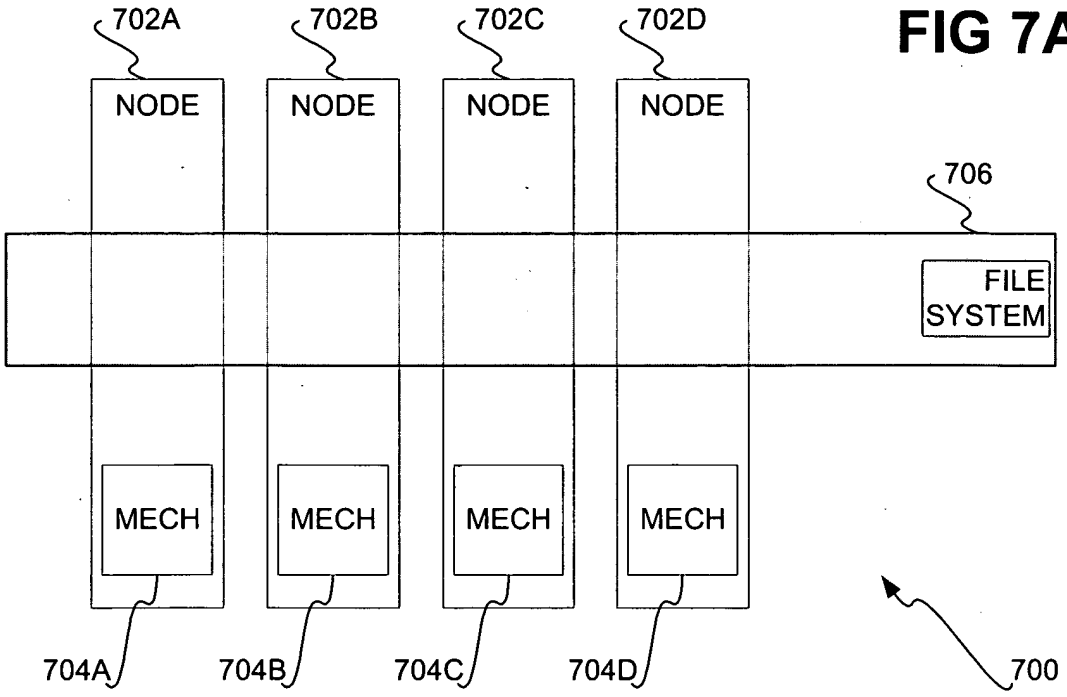

702A
702B
702C
702D
NODE
NODE
NODE
NODE
706
FILE SYSTEM
MECH
MECH
MECH
MECH
704A
704B
704C
704D
700

FIG 7A

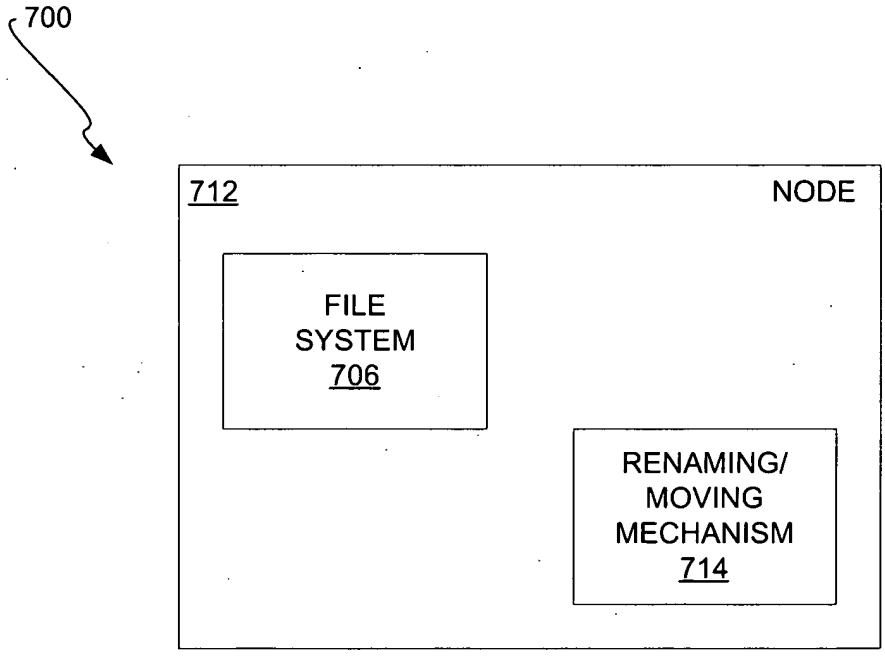

700
712
NODE
FILE SYSTEM 706
RENAMING/ MOVING MECHANISM 714

FIG 7B